

## ABSTRACT

A method of noise reduction in a system where polarization mode fluctuations contribute to the noise in a signal is provided. Specifically, a corrected signal is formed  
5 by adjusting the relative and overall intensity of the orthogonal polarization components of an unpolarized laser source at a first detector positioned at a first angle with respect to the laser beam axis so that the first detector has the same sensitivity to polarization as a second detector positioned at a second angle with respect to the laser beam axis. This corrected signal is then subtracted from the signal at the second detector which detects a  
10 desired signal.